



Bed Bugs



FACT SHEET 18-074-0411

After declining in incidence through the mid 20th century, bed bugs have undergone a dramatic resurgence. Worldwide, there are reports of increasing numbers of infestations. In the past, the presence of bed bugs was thought to be related to poor housekeeping. Today, this is not necessarily the case. Bed bugs can get established inside a dwelling when an infested piece of furniture or luggage is moved into the home, and some bed bug infestations may come from bird nests or bat roosts. Bed bugs are secretive insects so finding where they tend to hide is the key to successful control.

Q. What are bed bugs?

A. Bed bugs are in the insect family Cimicidae and include more than one species that attacks people. Adult bed bugs are oval, wingless, 1/4 to 3/8 inch (6-9 mm) long and rusty red or mahogany in color. After a blood meal, their body becomes swollen and the color changes to dark red. Female bed bugs lay their eggs in secluded areas, depositing up to 5/day and 500 during a lifetime. Newly hatched bugs (nymphs) are similar to adults except they are much smaller and almost colorless. Bed bugs grow by shedding their skin (molting). Each nymph must have a blood meal to molt to the next stage. Adults feed once a week on the average, but will feed many times during their life span of four months or longer.



Q. Should I be concerned about bed bug bites?

A. Bed bugs usually feed at night when people are asleep. They may bite anywhere on a human body, especially on exposed sites around the face, neck, upper torso, arms, and hands. Individual bed bugs need 3 – 15 minutes to feed. Both male and female bed bugs bite. Bed bugs feed mainly on the blood of humans, but also suck blood from other animals, including birds and bats. There are currently no known cases of disease resulting from bed bug bites only.

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Bed bugs suck blood from their host with piercing mouthparts similar to those of a mosquito. The act of biting is usually not felt, but later there is an allergic reaction to the protein found in the bed bug's saliva. A colorless wheal or reddish lump develops at the bite location (in contrast, flea bites have reddish centers and occur mainly around the ankles). Scratching the bitten areas may introduce an infection. Discomfort from bed bug bites may be delayed for 10-14 days, and may last a week or more. Bedbug bites do not usually require any treatment. Apply local antiseptic lotion or antibiotic cream or ointment if secondary infection occurs.



Bed bugs feed on human blood and bites tend to occur around the upper body on the face, neck, hands and arms.

Reaction to bed bug bites depends on the individual. Bites can be painless and undetectable in some people, but others may be quite sensitive to bites. People who are more sensitive to the bite can have localized allergic

reactions. Some people who suffer numerous bites can develop a "sensitivity syndrome," which can cause nervousness, persistent agitation (jumpiness), and sleeplessness.

Q. Is there more than one type of bed bug that will bite humans?

A. All members of the bed bug family are very similar in appearance and feed on the blood of birds or mammals. The two main species that bite humans are the common bed bug (*Cimex lectularius*), and the tropical bed bug (*Cimex hemipterus*). *Cimex lectularius* is a cosmopolitan species, most frequently found in the northern temperate climates of North America, Europe, and Central Asia. In Florida and tropical regions it is replaced by *C. hemipterus*. The chimney swift bug (*Cimexopsis nyctalis*), and the swallow bug (*Oeciacus vicarius*), feed primarily on birds. However, they can occasionally be pests in houses when the birds are nesting in or around the home. The Eastern bat bug (*Cimex adjunctus*) and Western bat bug (*Cimex pilosellus*) may come into homes in the spring with colonies of bats. Bird and bat bugs will be found feeding in the living quarters of homes in many of the same places as common bed bugs, but the source of these infestations is located within walls or attic areas.

Q. How do bed bugs get into dwellings?

A. Since bed bugs are wingless, they must crawl or be carried from infested areas to uninfested areas. Usually bed bugs become established in structures when they hitch a ride in boxes, baggage, furniture, bedding, laundry, and, in and on clothing worn by people coming from infested sites. Once inside a dwelling, bed bugs hide in cracks and crevices, close to areas where people sleep. Outside of homes, they may infest offices, theaters, clothing stores, hospitals, and any other place people congregate.

Q. What are the things I can do to prevent bed bugs from getting into my home or quarters?

A. Indirect, proactive measures can go a long way in preventing bed bugs from gaining access to the inside of a dwelling. Exclude bats from roosting in the building. Remove swift and swallow nests while the birds are in the process of nest-building (since these birds and many bats are protected animals, no action can be taken directly against them that may cause them harm). Remove debris from around the house, repair cracks in walls, and caulk windows and doors. Be wary of acquiring rental or secondhand beds, bedding, and furniture, and at a minimum examine these items carefully before they are brought into a dwelling. If staying in temporary lodging, elevate luggage off the floor and do not store items on or under the bed. When returning from travel, before unpacking, seal clothing and luggage inside a plastic bag. Carefully examine these items for the presence of bed bugs. Launder all clothing using the highest heat settings for washing and drying. Bed bug eggs, nymphs, and adults will be killed when exposed to temperatures of 115° F (46° C) for 15 minutes. Exposing bed bugs to cold, using currently available techniques, is neither a reliable nor recommended method for treating luggage.



Bed bugs often congregate along the seams of mattresses and box springs.

Q. What do I look for when I suspect a bed bug infestation?



Bed bug excrement appears as dark dots or specks on the headboard, bed frame, mattress and bed spread.

A. At the beginning of an infestation, bed bugs are likely to be found only in the tufts, seams, and folds of mattresses, box springs, and headboards. Look for black and brown spots of dried excrement (composed primarily of blood); this can help pinpoint bed bug hiding areas. Sometimes a distinctive sweetish odor may be detected. In hotels and motels, the area behind the headboard is often the first place that the bugs become established. Later, they spread to cracks and crevices in the bed frame and move beyond the bed area. If allowed to multiply, during the daytime hours they can be found hiding along, inside, or behind: edges of carpeting, baseboards, window and door casings, pictures, moldings, loosened wallpaper, cracks in plaster and partitions, furniture, and electrical outlets.

Q. What can I do to get rid of bed bugs in my home or quarters?

A. Nonchemical Approaches. Consult with Preventive Medicine Activity personnel at your supporting clinic to confirm that you have bed bugs and/or obtain identification of any bed bug-like insects found inside the dwelling. Proper identification of specimens is essential to devise an effective treatment strategy and to establish whether bats, swallows, chimney swifts or other wild animals are involved. Inspect your mattress, box spring, bed frame, and head board; particularly at folds, seams, crevices, joints, corners, and screw holes. Look not only for bed bugs but for shed skins, feces, and eggs. Vacuum all the crevices on your mattress, bed frame, baseboards and any objects close to the bed. Use a brush or crevice attachment with a scraping motion to dislodge bed bugs or eggs. Remove the mattress and box spring from the bed frame and inspect and vacuum all surfaces, removing all loose debris and visible bed bugs. Flip the bed frame over and vacuum any crevices where bed bugs may hide. Dispose of vacuumed contents in a sealed plastic bag. Launder all linens using the highest heat settings for washing and drying. Consider covering the mattress and box springs with a quality bed bug-impermeable encasement. Encasing both mattress and box spring eliminates the need to discard bedding by trapping bed bugs inside and providing a smooth outer surface that can be inspected, vacuumed and cleaned easily.

Chemical Approaches. Pesticides are an important tool for bed bug elimination. Insecticides can be applied to cracks and crevices of dressers, wooden bed frames and headboards, door and window trim, baseboards and similar sites. Few chemicals provide effective residual control, so preventive applications of pesticides for bed bug control are not recommended. Consideration should be given to the fact that people typically spend in excess of 8 hours per day in the bedroom. If the insecticides are applied according to label instructions, there should be little risk of exposure. Always contact the Installation Pest Control Office and/or the residential housing office (if applicable) before applying any pesticides for bed bug control inside a dwelling.

Q. Where can I get more information on bed bugs?

A. Contact the U.S. Army Public Health Command (Provisional), AIPH Entomological Sciences Program, Aberdeen Proving Ground, MD 21010-5403: DSN 584-3613, CM (410) 436-3613: FAX – 2037; <http://phc.amedd.army.mil/topics/envirohealth/epm>.

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